

Saari, Christopher A - DNR

From: Dave Larsen <dlarsen@reiengineering.com>
Sent: Monday, October 02, 2017 5:03 PM
To: Saari, Christopher A - DNR
Subject: RE: Tower Standard - Groundwater Monitoring Cost Request Needed
Attachments: Well Sampling - Tower Standard - Oct 2017.pdf

Chris, attached is a cost estimate for the scope of services presented below. REI chose to analyze groundwater samples for PVOC plus naphthalene, 1,2-dichloroethane (1,2-DCA) and 1,2-dibromoethane (EDB) along with dissolved iron, lead and cadmium along with nitrate/nitrite and sulfate. Sampling network includes the MW16-MW22 wells installed by REI and the 2 wells installed under EPA for a total of 16 wells. This sampling scope does not include the three (3) wells installed by LDF (LDFMW1-LDFMW3). REI also requests the flexibility to either add or remove recommended parameters based on site specific data and WDNR concurrence.

All wells will be sampled utilizing low flow methodologies (peristaltic pump discharging through a flow cell equipped with a multi-parameter sonde to measure dissolved oxygen, specific conductance, pH, ORP and temperature). All purge water will be containerized and transported off-site for disposal upon completion of each well sampling event. REI will also replace the locks on each of the wells previously identified as "missing locks".

REI will prepare a brief update report documenting well sampling results on a semi-annual basis. Prior to initiating any well sampling activities, REI will secure access with each of the three (3) property owners (Sundberg, Yach and Kozak) specific to the completion of well sampling activities.

REI will also prepare a comprehensive well sampling work plan in compliance with the agreement Sundberg has entered into with the Lac du Flambeau Tribal Natural Resources Department.

Additional costs are included for project management time and discussions with EPA, EPA contractor(s), WDNR and property owners specific to the EPA proposed air sparge/SVE and excavation pilot tests.

Please let me know if you have any questions or concerns regarding this project or the proposed scope of services provided.

Thank you,

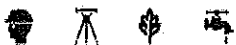
David N. Larsen P.G.




Hydrogeologist / Professional Geologist



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From: Saari, Christopher A - DNR [mailto:Christopher.Saari@wisconsin.gov]
Sent: Monday, October 02, 2017 2:20 PM
To: Dave Larsen <dlarsen@reiengineering.com>
Subject: Tower Standard - Groundwater Monitoring Cost Request Needed

Hi Dave:

I think we've talked before about DNR's desire to get some routine groundwater monitoring completed at Tower Standard while we try to work through the investigative and remedial discussions. With this message, I am requesting that you prepare a cost request for eight (8) rounds of quarterly groundwater monitoring from the existing monitoring well network. Samples should be analyzed for the appropriate petroleum volatiles plus 1,2-dichloroethane and 1,2-dibromoethane (EDB). I will leave it to you to determine which analytical method(s) would be most cost-effective to gather this parameter data.

Once we have received and approved the cost request, we will need to request permission to access the monitoring wells on the Yach and Sundberg properties. We will have to discuss whether it would be more appropriate for DNR or REI to make the access request. For the Sundberg property, you will need to follow the process spelled out in the access agreement that the Lac du Flambeau Tribal Natural Resources Department (TNR) has with the Sundbergs for that property, including submittal of a sampling scope of work (SOW). DNR anticipates that you will submit one SOW that will cover all eight sampling events, as each event will be conducted in the same manner. Our expectation is that you will sample all monitoring wells to which you have access.

DNR would like the monitoring to commence as soon as all necessary approvals and access permissions are obtained. Please call me if you have questions about this request. Thanks.

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Chris Saari
Hydrogeologist – Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
Phone: (715) 685-2920
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Christopher.Saari@Wi.gov



dnr.wi.gov



Usual and Customary Standardized Invoice #22

July 2017 - December 2017



RR-083A

PECFA #: 54538-9514-67
 BRRT's #: 03-64-127899
 Site Name: Tower Standard
 Site Address: 14267 Hwy 70, Lac du Flambeau

Vendor Name: REI
 Invoice #:
 Invoice Date: 10-2-17 Proposal Date
 Check #:

U&C Total \$ 41,073.18
 Variance to U&C Total \$ 18,831.85
 Grand Total \$ 59,905.03

TASK	TASK DESCRIPTION	SERVICES	ACTIVITY CODE	ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAX UNIT COST	UNITS	TOTAL MAX
1	GW Sampling		GS05	Sample Collection	Well	\$ 72.45	128	\$ 9,273.60
1	GW Sampling		GS10	Incremental Sample Collection (natural attenuation)	Well	\$ 47.67	128	\$ 6,101.76
1	GW Sampling		GS15	Incremental Sample Collection (cadmium & lead)	Well	\$ 26.25	128	\$ 3,360.00
1	GW Sampling		GS25	Primary Mob/Demob	Site	\$ 628.11	8	\$ 5,024.88
4	Waste Disposal	Consultant	WD05	Consultant Coordination	Site	\$ 137.13	8	\$ 1,097.04
4	Waste Disposal	Commodity	WD10	GW Sample and/or Purge	Drum	\$ 42.11	8	\$ 336.88
4	Waste Disposal	Commodity	WD25	Primary Mob/Demob	Site	\$ 287.70	8	\$ 2,301.60
6	Letter Report/Addendum		LRA05	Letter Report/Addendum	Letter	\$ 1,039.29	4	\$ 4,157.16
15	Misc. Drilling Activities & Supplies		MDT21	Drum, 55 gal. DOT steel	Each	\$ 55.13	8	\$ 441.04
15	Misc. Drilling Activities & Supplies		MDT45	Padlocks	Each	\$ 7.98	3	\$ 23.94
21	Access Agreements		AA05	Access Agreements	Property	\$ 401.94	3	\$ 1,205.82
33	Schedule Of Laboratory Maximums	Commodity		Laboratory (see task 33 total on Lab Schedule)	Lab Schedule		640	\$ 7,367.68
36	Change Order Request		COR05	Change Order Request (cost cap exceedance requests)	Change Order	\$ 381.78	1	\$ 381.78
Variance	Lab Variance for PVOC+3 Parameters and Low Flow Sampling				Variance	\$12,800.00	1	\$ 12,800.00
Variance	Comprehensive Work Plan Generation				Variance	\$1,645.05	1	\$ 1,645.05
Variance	Additional Project Management Time				Variance	\$3,290.10	1	\$ 3,290.10
Variance	Pilot Test Discussions with EPA/EPA Contractor/WDNR/Property Owners				Variance	\$1,096.70	1	\$ 1,096.70

Usual and Customary Standardized Invoice #22

July 2017 - December 2017



RR-083A

TOTAL LAB CHARGES \$ 7,367.68	TASK 33	640	\$ 7,367.68	TASK 24	0 \$ -
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MATRIX	REF CODE	REIMBURSABLE ANALYTE	UNITS	MAX COST	SAMPLES	TOTAL	MAX COST	SAMPLES	TOTAL
AIR	A1	Benzene	SAMPLE	\$ 44.94		\$ -			
AIR	A2	BETX	SAMPLE	\$ 49.46		\$ -			
AIR	A3	GRO	SAMPLE	\$ 46.10		\$ -			
AIR	A4	VOC's	SAMPLE	\$ 71.93		\$ -			
WATER	W1	GRO/PVOC	SAMPLE	\$ 29.19		\$ -			
WATER	W2	PVOC	SAMPLE	\$ 26.99		\$ -			
WATER	W3	PVOC + 1,2 DCA	SAMPLE	\$ 43.79		\$ -			
WATER	W4	PVOC + Naphthalene	SAMPLE	\$ 30.35		\$ -			
WATER	W5	VOC	SAMPLE	\$ 71.93		\$ -			
WATER	W6	PAH	SAMPLE	\$ 72.98		\$ -			
WATER	W7	Lead	SAMPLE	\$ 12.39	128	\$ 1,585.92			
WATER	W8	Cadmium	SAMPLE	\$ 13.55	128	\$ 1,734.40			
WATER	W9	Hardness	SAMPLE	\$ 12.39		\$ -			
WATER	W10	BOD, Total	SAMPLE	\$ 23.63		\$ -			
WATER	W11	Nitrate	SAMPLE	\$ 11.24	128	\$ 1,438.72			
WATER	W12	Total Kjeldahl	SAMPLE	\$ 20.27		\$ -			
WATER	W13	Ammonia	SAMPLE	\$ 16.91		\$ -			
WATER	W14	Sulfate	SAMPLE	\$ 10.19	128	\$ 1,304.32			
WATER	W15	Iron	SAMPLE	\$ 10.19	128	\$ 1,304.32			
WATER	W16	Manganese	SAMPLE	\$ 10.19		\$ -			
WATER	W17	Alkalinity	SAMPLE	\$ 10.19		\$ -			
WATER	W18	methane	SAMPLE	\$ 46.10		\$ -			
WATER	W19	Phosphorous	SAMPLE	\$ 18.06		\$ -			
WATER	W20	VOC Method 524.2	SAMPLE	\$ 176.30		\$ -			
WATER	W21	EDB Method 504	SAMPLE	\$ 95.45		\$ -			
SOILS	S1	GRO	SAMPLE	\$ 24.78		\$ -	MAX COST	SAMPLES	TOTAL
SOILS	S2	DRO	SAMPLE	\$ 30.35		\$ -	\$ 24.78		\$ -
SOILS	S3	GRO/PVOC	SAMPLE	\$ 28.14		\$ -	\$ 30.35		\$ -
SOILS	S4	PVOC	SAMPLE	\$ 25.83		\$ -	\$ 28.14		\$ -
SOILS	S5	PVOC + 1,2 DCA + Naphthalene	SAMPLE	\$ 49.46		\$ -	\$ 25.83		\$ -
SOILS	S6	PVOC + Naphthalene	SAMPLE	\$ 36.02		\$ -	\$ 49.46		\$ -
SOILS	S7	VOC	SAMPLE	\$ 71.93		\$ -	\$ 36.02		\$ -
SOILS	S8	SPLP Extraction VOC only	SAMPLE	\$ 50.61		\$ -	\$ 71.93		\$ -
SOILS	S9	PAH	SAMPLE	\$ 72.98		\$ -	\$ 50.61		\$ -
SOILS	S10	Lead	SAMPLE	\$ 12.39		\$ -	\$ 72.98		\$ -
SOILS	S11	Cadmium	SAMPLE	\$ 14.60		\$ -	\$ 12.39		\$ -
SOILS	S12	Free Liquid	SAMPLE	\$ 11.24		\$ -	TASK 24 TOTAL \$ -		
SOILS	S13	Flash Point	SAMPLE	\$ 25.83		\$ -			
SOILS	S14	Grain Size - dry	SAMPLE	\$ 42.74		\$ -			
SOILS	S15	Grain Size - wet	SAMPLE	\$ 57.33		\$ -			
SOILS	S16	Bulk Density	SAMPLE	\$ 13.55		\$ -			

MATRIX	REF CODE	REIMBURSABLE ANALYTE	UNITS	MAX COST	SAMPLES	TOTAL	MAX COST	SAMPLES	TOTAL
SOILS	S17	Permeability	SAMPLE	\$ 41.58		\$ -			
SOILS	S18	Nitrogen as Total Kjeldahl	SAMPLE	\$ 20.27		\$ -			
SOILS	S19	Nitrogen as Ammonia	SAMPLE	\$ 16.91		\$ -			
SOILS	S20	% Organic Matter	SAMPLE	\$ 29.19		\$ -			
SOILS	S21	TOC as NPOC	SAMPLE	\$ 57.33		\$ -			
SOILS	S22	Soil Moisture Content	SAMPLE	\$ 6.83		\$ -			
SOILS	S23	Air Filled Porosity	SAMPLE	\$ 25.83		\$ -			
SOILS	S24	% Total Solids	SAMPLE	\$ 6.83		\$ -			
SOILS	S25	Field Capacity	SAMPLE	\$ 28.14		\$ -			
SOILS	S26	TCLP Lead	SAMPLE	\$ 83.16		\$ -			
SOILS	S27	Cation Exchange (Ca, MG, & K)	SAMPLE	\$ 26.99		\$ -			
SOILS	S28	TCLP Cadmium	SAMPLE	\$ 83.16		\$ -			
SOILS	S29	TCLP Benzene	SAMPLE	\$ 83.16		\$ -			
		Viscosity + Density							
LNAPL	LFPS01	Interfacial tension I (LNAPL/water [dyne/cm])	SAMPLE	\$ 561.33		\$ -			
		Interfacial tension II (LNAPL/air [dyne/cm])							
		Interfacial tension III (water/air) [dyne/cm])							
TASK 33 TOTAL						\$ 7,367.68			

Variance Request
Tower Standard
Laboratory Charges / Low Flow Sampling
10-2-17 Proposal Date

Unit Costs are based on present values on above listed date

Description	Units	Quantity	Unit Cost	Event	Events	Total Cost	Subtotal
Commodity Charges							
PVOC + naphthalene, 1,2-DCA and EDB	each	16	\$50.00	\$800.00	8	\$6,400.00	
Low Flow Well Sampling							
Additional Cost for Low Flow Sampling	Well	16	\$50.00	\$800.00	8	\$6,400.00	
Total						Total	\$12,800.00

\\reifnp\projects\0900-0999\0903-Tower\903 Proposed Work\2017\Well Sampling - Work Plan Generation.xlsx\Lab Variance

Variance Request
Tower Standard
Groundwater Sampling Work Plan Preparation
10-2-17 Proposal Date

Unit Costs are based on present values on above listed date

Description	Units	Quantity	Unit Cost	Event	Events	Total Cost	Subtotal
Comprehensive Work Plan Preparation	hr	15	\$109.67	\$1,645.05	1	\$1,645.05	
						Total	\$1,645.05
Total						Total	\$1,645.05

\\reifnp\projects\0900-0999\0903-Tower\903 Proposed Work\2017\[Well Sampling - Work Plan Generation.xlsx]Work Plan Preparation

Variance Request
Tower Standard
Groundwater Sampling Work Plan Preparation
10-2-17 Proposal Date

Unit Costs are based on present values on above listed date

Description	Units	Quantity	Unit Cost	Event	Events	Total Cost	Subtotal
Additional Project Management Time	hr	30	\$109.67	\$3,290.10	1	\$3,290.10	
						Total	\$3,290.10
Total						Total	\$3,290.10

\\reifnp\projects\0900-0999\0903-Tower\903 Proposed Work\2017\[Well Sampling - Work Plan Generation.xlsx]Project Management

Variance Request
Tower Standard
Pilot Test Discussions with WDNR/EPA
10-2-17 Proposal Date

Unit Costs are based on present values on above listed date

Description	Units	Quantity	Unit Cost	Event	Events	Total Cost	Subtotal
Pilot Test Design	hr	10	\$109.67	\$1,096.70	1	\$1,096.70	
						Total	\$1,096.70
Total						Total	\$1,096.70

\\reifnp\projects\0900-0999\0903-Tower\903 Proposed Work\2017\[Well Sampling - Work Plan Generation.xlsx]Pilot Test Discussions